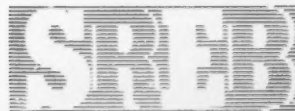


REACHING THE GOAL OF READINESS FOR COLLEGE

592 Tenth Street, N.W. • Atlanta, Georgia 30318-5790 • 1989 • \$5.00



Southern Regional Education Board

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FOREWORD

States should strive for national, and increasingly international, standards in education. There is wide agreement among state leaders about this. All Southern Regional Education Board states have implemented educational reforms and new standards. The long-term results of these changes will determine whether there is a better future, with improved standards of living, for the citizens of this region.

But what results are expected from the new educational standards and programs?

- Have state leaders shaped the educational reforms into a vision of what they expect to accomplish?
- Do educators and government officials have ways of knowing whether they are on track with the educational programs? Of knowing whether they are supporting them adequately?

States that set educational goals will need to know what actions or results—what indicators of progress—will signal to citizens, educators, and government leaders that they are moving toward or reaching those goals. This report is one in a series presenting information about the “indicators of progress” for each goal in SREB’s report, *Goals for Education: Challenge 2000*. The first group also includes reports that deal with school readiness and state funding for schools and colleges. Reports looking at other goals and related indicators will appear in the future.

SREB has suggested 12 goals and specific “indicators of progress” for each. These are not the only important goals or indicators. As priorities differ, so will goals and indicators. Each of the three reports in the current series provides information on issues related to a specific goal and the set of indicators to track progress.

Improving college readiness, or reducing the percentage of entering college students who need remedial work, is a major concern of educators and governmental leaders. This particular report identifies several issues related to preparing students for college and important questions for monitoring progress toward the goal. It provides estimates of the number of entering college students who need remedial coursework and information on special high school diplomas for college-bound students and high school academic courses required for admission to public colleges and universities in the SREB states.

The report also indicates that few states currently have in place state-level information systems which can provide the answers to some of the critical questions about students’ progress through elementary and secondary school and college. State departments of education, state higher education agencies, and institutions of higher education have provided the factual information in this report. Their assistance reflects the spirit of sharing and interstate cooperation for which the SREB region is known.

Winfred L. Godwin, President
Southern Regional Education Board

BY THE YEAR 2000—

4 of every 5 students entering college will be ready to begin college-level work.

Goals for Education
CHALLENGE 2000

More than one-third of the freshmen entering colleges and universities in the SREB states may need remedial instruction. That estimate (which is some 210,000 students) was given to SREB by college and university officials. At many institutions the estimate of entering students needing remedial help was closer to one-half (see Table 1).

To increase the percentage of students ready to begin college-level work from 65 percent to 80 percent will require strong efforts from schools *and* colleges. If states meet this goal, essentially they will have reduced by one-half the remedial education problems in their colleges. Such a dramatic change in a stubborn problem will not come easily.

In 1980, of every 100 persons over age 25 in the nation, 67 had completed four years of high school or more, but in the SREB states the total was only 60 of 100. Nationally, 32 of 100 had some postsecondary education; the corresponding figure was 29 of 100 in the SREB states. Nationally, 16 of 100 had completed four or more years of college, compared to 15 in the SREB states.

While high school graduation and college enrollment rates improved dramatically for all groups during the 1970s and 1980s, black and Hispanic students still are much less likely to complete college than are white students. It is estimated that in 1986, 19 percent of the white adult population in the region had completed four or more years of college compared to 10.5 percent of black adults and 8.4 percent of Hispanic adults. Reducing the disparities in educational attainment among ethnic groups is a *must* if SREB states are to reach national levels and compete successfully in economic development.

We cannot afford to wait for the year 2000 to know if we have met the goal of college readiness. Nor do we have to wait.

Colleges and universities can provide annual measures of progress by reporting results of freshman placement tests and success rates of students in both remedial and regular programs of study.

In states determined to have more students prepared for college, annual indicators that track student performance in secondary (or even elementary) school will provide the handwriting on the wall—foretelling if progress is being made.

Meeting the long-term goal of SREB states to reach national levels for students completing four or more years of college will require that more high school students complete a solid core of the academic subjects that are needed to do college-level study. It follows that students will not be ready to begin the college preparatory academic subjects in high school unless they develop appropriate skills in elementary school.

The major college readiness issues are:

- (1) defining college-level study and college preparatory curricula;
- (2) increasing the number and percentage of high school students participating in college preparatory curricula;
- (3) improving the quality of secondary school preparation for college.

Assessing progress will require monitoring the movement of students through the "educational pipeline."

What are some of the important questions about getting students ready for college?

1. Have the public 4-year colleges and universities in the state established clear standards for admission that include a core of required academic high school courses?

Table 1
AVERAGE PERCENT OF
FIRST-TIME FRESHMEN
NEEDING REMEDIAL/
DEVELOPMENTAL
EDUCATION, BY TYPE OF
PUBLIC INSTITUTION,
SREB STATES, 1986

	Two-Year Colleges	Liberal Arts/ Comprehensive	Doctoral/ Research	All Institutions
SREB States	37.3%	37.6%	22.3%	35.7%
Alabama	55.5	32.6	13.3	43.1
Arkansas	32.5	45.4	33.0	38.2
Florida	42.6	26.5	4.3	35.1
Georgia	33.1	38.3	20.0	34.6
Kentucky	38.4	27.0	19.0	31.6
Louisiana	62.0	58.6	43.0	56.3
Maryland	36.9	41.2	20.0	36.6
Mississippi	33.7	38.0	24.2	31.3
North Carolina	40.2	28.0	9.7	36.2
Oklahoma	24.6	28.2	15.0	25.1
South Carolina	52.1	47.2	2.0	46.4
Tennessee	55.3	47.7	31.5	46.6
Texas	28.1	38.9	30.6	30.5
Virginia	23.5	30.6	25.0	25.2
West Virginia	39.8	32.0	—	34.8

NOTE: These 1986 institutional responses were based on experience in prior years of percent of students needing one or more remedial/developmental courses. The percentages are influenced by factors such as number of responding institutions, their individual missions, and their different standards, or lack of specific standards, to determine if students need remedial/developmental education.

SOURCE: "Remedial Education In College: How Widespread Is It?" *Issues in Higher Education*, No. 24, Southern Regional Education Board, 1988.

2. How many exceptions to these standards does each institution grant each year? Is the number of exceptions rising or falling?

group is white? Black? Hispanic? Male? Female? Are these percentages increasing over time? Decreasing?
3. What percent of students are enrolled in college preparatory programs in the high schools? What percent of these are white? Black? Hispanic? Native American? Asian? Male? Female? Are these percentages rising or falling?

SREB recommends that the percentage of students enrolled in college preparatory programs equal or exceed the percentage of graduates who enter postsecondary programs. At present this is not the case in any SREB state.
4. What percent of high school students are enrolled in and graduate from vocational-technical programs? What percent of this
5. What percent of students are enrolled in a general curriculum or other types of high school programs? Are the percentages available by ethnic group and sex? How are the percentages changing?
6. What percent of students from college preparatory programs go on to postsecondary education within one year of completing high school? From the vocational programs? From the general program? Are these percentages changing?
7. What percent of students will have successfully completed algebra I by Grade 10? Is this information available for each ethnic group? By sex?

Algebra I is a "gatekeeper" course. Students who have not completed algebra I early in their high school program will have great difficulty getting all the math they need to be ready for college. Also, they probably will not take, nor be counseled to take, the other courses needed in their final two years of high school to prepare them for college.

8. What percent of students have completed other critical courses at the appropriate point in their programs, that is, specific English, foreign language or science courses? Is the data available by ethnic group and sex?

9. Is there a process for periodically assessing the quality of courses offered in the high schools, such as end-of-course tests in critical subjects?

10. How many high schools offered Advanced Placement courses last year? Is this number rising? Falling?

SREB recommends a goal of at least 60 percent by the year 2000.

11. What percent of students taking Advanced Placement examinations scored at or above the national average in each subject?
12. What was the percent of students scoring at or above 3 on the Advanced Placement examinations in each subject? In recent years have these percentages been rising or falling? (A score of 3 or better represents the point at which most colleges offer credit or advanced standing.)
13. How are high school students doing on nationally normed tests of achievement? How well are white students doing? Blacks? Hispanics? Males? Females?
14. Are the differences among majority and minority groups in performance on nationally normed tests being reduced or is the gap widening?
15. Whenever possible between now and the year 2000, is the state planning to collect

National Assessment of Educational Progress data so that state results can be compared with national results?

16. Does the state have a way of giving prospective college students a signal while they are in high school that they are "on schedule" for being ready for first-year college courses?

Results of college placement tests given in the 11th grade or scores on high school end-of-course tests can be used to alert students.

17. Has every institution of higher education clearly defined the skills students need to begin college-level study?

18. When each institution of higher education carries out its annual assessment of how many students need to be placed in remedial courses, can it report the rate is for students who met their course requirements for admission? By ethnic groups? By sex?

19. How often does each institution of higher education assess just how well its remedial program is working? What does that information show for students from different backgrounds?

20. Does the state have a system for sending information from colleges to schools showing which or how many of their recent graduates needed remedial courses in college? Do these reports show if the students successfully completed the remedial courses? Are the students who complete remedial courses satisfactorily as successful as other students in regular degree credit courses? What percent of students needing remedial courses successfully complete the first year and continue into the second year of college? How do these rates compare to the rates for other students?

If these questions were asked of individual states today, which ones could be answered? Is there adequate information by majority or minority student groups? By sex? Are educational and governmental leaders receiving regular reports on the answers? Which questions are so

important that, if they cannot be answered, the information should be gathered?

A 1989 survey by SREB suggests that in almost every state many of these questions cannot presently be answered or answered positively, particularly as they relate to the status and progress of students from different ethnic groups.

To have 4 of 5 entering college students ready to do college-level work, states will need answers to the above questions and will need to take actions as indicated. Without the answers and the actions, the problem of too many students needing remedial courses in college will be little different in the year 2000 than it is today.

DEFINING COLLEGE PREPARATORY (ACADEMIC) CURRICULA

Common sense suggests that the kinds of courses taken in high school influence performance on college admissions and placement tests and the degree of success in college. Available evidence confirms this fact. Choosing the "right" courses is critical because those students who are most likely to be fully prepared for college-level studies are those who have completed a "college prep" or "academic" program of study. To reduce remediation in college it is necessary to increase the percentage of high school students who enroll in and successfully complete college preparatory courses and curricula.

The National Commission on Excellence in Education recommended in 1983 that college-bound high school graduates complete a minimum of 15 units, including 4 years of English, 3 years of social studies, 3 years of mathematics, 3 years of science, and 2 years of foreign language. Most SREB states have in effect, or have recommended, an increased number of units in college preparatory courses for admission to four-year public colleges and universities (see Table 2).

Those states which have not formally adopted minimum statewide course requirements for admission encourage high school students to take a solid college preparatory curriculum to be considered for admission to public colleges and universities. The university systems in Florida and Georgia require at least the number of units and the distribution of courses recommended by the National Commission. Other states require or recommend the total number of units, but the distribution of courses is different.

Of the SREB states that offer special recognition diplomas, 10 require the units recommended by the National Commission on Excellence in Education (see Table 3).

In those states where minimum course requirements for admission to public four-year colleges and universities have been in place long enough to gauge their impact, high school students appear to be responding well. The South Carolina Commission on Higher Education reports that 81 percent of the state residents who enrolled as freshmen in South Carolina public colleges in 1988 met all of the prerequisite course requirements. In 1987, the year before these standards went into effect, only 47 percent of the freshmen who were state residents had taken all of the high school courses. Tennessee reports similar results.

All SREB states have more schools and students participating in the Advanced Placement program, which provides a way for high schools to offer college-level courses to talented students (Table 4). In 1988, more than 32 percent of the high schools in SREB states offered one or more Advanced Placement courses to more than 71,000 students in grades 10 through 12. One of the benefits of participating in the Advanced Placement program is that the school must offer prerequisite courses to prepare students for these courses, which helps strengthen the total curricula. The kinds of skills and knowledge needed to successfully complete Advanced Placement courses are typical of the skills and knowledge that will be required of high school graduates when they enter college.

Table 2
UNITS OF HIGH SCHOOL
WORK REQUIRED AT
THE STATE LEVEL FOR
COLLEGE ADMISSIONS,
SEVEN STATES, 1988

	English	Math	Science	Social Studies	Foreign Language	Comments
Arkansas Recommended	4	2	2	3	2	Science units must be taken in biology, physics, or chemistry. ½ unit of computer science is also required. Foreign language must be in one language.
Florida Required	4	3	3	3	2	Four additional electives within the college preparatory areas or from a list of approved electives are required.
Georgia Required	4	3	3	3	2	The following courses are strongly recommended: fine arts, one additional lab course in science, a third course in foreign language or study in a second foreign language, trigonometry, computer technology, typing, and physical and health education.
Kentucky Required	4	3	2	2	—	One additional unit each in math and science, study in a foreign language, fine arts, and computer science are also recommended.
Louisiana Recommended	4	3	3	3	3	½ unit of "Free Enterprise" required. Two units of physical education, one unit of fine arts, and one unit of typing are also recommended.
Maryland Required	4	3	2	3	2 (effective in 1992)	Two years of foreign language and one additional math course are currently recommended.
Mississippi Required	4	3	3	2½	—	One elective in math, science, or foreign language is required. Units in foreign language, computer science, and typing are also recommended.
North Carolina Required, 1990	4	3	3	2	—	Two units of foreign language are recommended. One language unit and one math unit should be taken in the 12th grade.
Oklahoma Required	4	3	2	2	—	Two units of foreign language and two units from the following are recommended: computer science, speech, economics, geography, government, psychology, or sociology.
South Carolina Required	4	3	2	3	2	One additional unit is required: math, computer science, or a combination of these, or world history, world geography, or western civilization.
Tennessee Required	4	3	2	2	2	Math units must include Algebra I and II, and geometry or another advanced course. One unit of U.S. history is included in the social studies requirement. Institutions governed by the State Board of Regents require one unit in the visual and/or performing arts and recommend an additional unit in the arts, math, and foreign language.
West Virginia Required 1990	4	2	2	3	—	Two units in foreign language are recommended.

SOURCE: Compiled by the Southern Regional Education Board with information from the state higher education agencies.

Table 3
SPECIAL RECOGNITION
PROGRAMS FOR HIGH
SCHOOL GRADUATES,
SREB STATES, 1988

	Award	English	Math	Science	Social Studies	Foreign Language	Physical Education/ Health	Other Required Courses	Minimum Credits Required
Alabama	Advanced Diploma	4	3	3 (one lab)	4	2	1½	—	22
	Comments: Must become knowledgeable of computers through related coursework								
Florida	Academic Scholar Certificate	4	4	4 (two labs)	3	2	1	1 credit in fine arts	26
	Comments: Students scoring 1100 on the SAT, and graduating with a 3.0 GPA with no grade lower than a "C" will automatically be admitted to any state community college or university for up to three years after graduation; these students will also be eligible for a \$500 or \$750 scholarship while attending any public or private in-state institution								
Georgia	Seal of Endorsement	4	3	3 (two labs)	3	2	1	1 credit in vocational education, fine arts, or computer technology	21
Kentucky	Commonwealth Diploma	4 plus one AP course**	3 one AP course in either area	2	2	1 Must be an AP course	1	1 elective credit must be an AP course	22
	Comments: Students must complete an AP exam in at least three of the four required AP courses								
Louisiana	Regents Scholar	4	3	3	3½	3	2	1 credit in fine arts	24
	Comments: Certificate awarded by the Board of Regents								
	Louisiana Scholar Program	4	3	3	3	—	2	½ unit in computer literacy	23
	Comments: ACT score of 29 or above, 3.5 GPA with no semester grade lower than a "B," no unexcused absences, and no high school suspensions earns a Gold Seal on the diploma								
Maryland	Certificate of Merit	4	3	3	3	1	1	1 credit each in fine arts; computers, home economics, vocational education, or industrial arts/ technology education	20
	Comments: 2.6 cumulative GPA; must complete at least 12 credits of advanced courses, as defined by the local school systems in accordance with state criteria								
North Carolina	North Carolina Scholars Program	4	3	3	3	2	1	1 credit each in vocational education and arts education	22
	Comments: Overall "B" average; may opt to "concentrate" electives in one of seven areas								

**Table 3
(CONTINUED)**

	Award	English	Math	Science	Social Studies	Foreign Language	Physical Education/Health	Other Required Courses	Minimum Credits Required
Oklahoma	Academic Scholars Program	4	3	3	3	—	—	—	22
Comments: 3.7 GPA or rank in top 10 percent of graduating class; ACT score of 26 or SAT combined score of 1100									
South Carolina	Academic Achievement Honors Award	4	3	2	3	2	1	—	22
Comments: "B" or higher in each semester course; SAT score of 650 verbal or 700 mathematics									
Tennessee	Honors Diploma	4	3	3 (two labs)	3	2	1½	2 credits in fine arts	20½
Comments: Cumulative 3.0 GPA with no grade lower than a "C"									
Texas	Advanced High School Program	4	3	3	2½	2	2 (1½ physical education; ½ health)	½ credit in economics; 1 credit each in fine arts and computer science	22
Virginia	Advanced Studies Program	4	3*	3 (all lab)	3	3	2	1 credit in fine or practical arts (Effective Class of 1992)	23
Comments: Overall "B" average or better earns Governor's Seal on the diploma									
West Virginia Proposed	Certificate of Academic Excellence	Designed for students going beyond the standard requirements in completing a vocational or college preparatory curriculum; criteria include a 3.5 GPA							

* Includes algebra I and two courses above algebra I level.

** AP (Advanced Placement). College-level courses taken in high school.

SOURCE: Compiled by the Southern Regional Education Board with information from the state departments of education, 1988.

IMPROVING THE QUALITY OF COLLEGE PREPARATION

Getting more students into "academic" courses in high school will not automatically result in less remediation in college. Courses must be challenging enough to prepare students for college and students must perform well in them.

A recent SREB report indicates that all SREB states have developed or strengthened curriculum guides for most "academic" courses. A few states already are using end-of-course or subject area tests to obtain information about the degree to which these curriculum objectives are being met in high school classrooms. Through its end-of-

course testing program, North Carolina obtains information on students who have completed courses and how well they have met course objectives. North Carolina can also monitor changes in average scores over time by ethnic groups, sex, and grade level of students.

Colleges and universities can assist in improving the quality of preparation for college by providing better information to high schools on student performance in college.

Table 4
ADVANCED PLACEMENT
PROGRAMS FOR PUBLIC
SCHOOL STUDENTS,
SREB STATES, 1988

	Schools Offering Advanced Placement		Number of Advanced Placement Examinations Taken by Public School Students	Percent Increase in Examinations Taken 1986 to 1988	Percent of Students with Score of 3-5*
	Number	Percent			
USA	8,247	36	324,755	27	66
SREB	2,535	32	101,848	31	61
Alabama	227	40	4,168	52	52
Arkansas	60	14	894	24	65
Florida	299	50	25,111	24	54
Georgia	216	39	5,864	34	61
Kentucky	134	33	3,592	42	45
Louisiana	85	14	1,553	29	56
Maryland	202	62	8,543	20	71
Mississippi	58	13	997	16	48
North Carolina	223	42	7,676	26	62
Oklahoma	53	10	1,361	43	59
South Carolina	199	52	8,767	18	53
Tennessee	152	33	4,516	33	60
Texas	297	21	12,811	36	68
Virginia	271	57	14,924	40	72
West Virginia	59	27	1,071	73	49

* A score of 3-5 (on a 1-5 scale) is considered acceptable for college credit.
SOURCE: Data provided by The College Board Advanced Placement Program, 1988.

This can be information about performance on placement tests when students enter college and the success rates of freshman students in remedial and regular programs. When coupled with what the high schools learn from end-of-course and/or subject matter tests, such information can provide a tangible way for school and college faculty to work together to improve instruction and counseling for potential college students.

Eight SREB states have, or soon will have, annual reports from public colleges and universities to high schools on students' readiness for college (see Table 5).

In Louisiana an annual report on first-time entering freshmen provides information on

student performance at public colleges and universities. The report to the school system reveals how many of its high school graduates enrolled in Louisiana colleges and universities, how many were required to take remedial/developmental courses, and the number and percent of remedial/developmental students who completed the first term in good academic standing. The same information is provided on students who were not enrolled in remedial/developmental courses. A state summary shows, by admission test score ranges, the success rates of students required to take remedial courses, as well as those of students who went directly into the regular college curriculum.

Table 5
COLLEGE-READINESS
REPORTING PROGRAMS,
SREB STATES, 1988

	Established by	Institutions Involved	Type of Reporting
Florida	Legislative Mandate	All Public Colleges/Universities	Placement and Performance
Georgia	System Procedure	All Public Colleges/Universities	Placement and Performance
Louisiana	Legislative Mandate	All Public Colleges/Universities	Placement and Performance
Maryland	System Procedure	State Universities and Colleges	Performance
North Carolina	University Initiative	University of North Carolina System	Under Development
South Carolina	Legislative Mandate	All Colleges/ Universities	Performance
Tennessee			
Board of Regents	Board Policy	University/Community College System	Placement
University of Tennessee	System Procedure	University of Tennessee System	Placement and Performance
Texas	Legislative Mandate	All Public Colleges/Universities	Placement and Performance

SOURCE: "Reporting to High Schools on Students' Readiness for College: An Idea Worth Developing," *Regional Spotlight*, Vol. XV, No. 3, Southern Regional Education Board, June 1988.

MONITORING PROGRESS TOWARD THE GOAL

The five indicators of progress toward improved college readiness identified in SREB's *Goals for Education* focus on the high school and early college years of the "educational pipeline." As states act to prepare more of their young people for college, and thereby reduce differences in levels of educational attainment and achievement between the white and minority populations, it will be important to develop systems for monitoring these or similar indicators.

Ideally, such systems would track students from the time they enter the school system through graduation and into postsecondary institutions and the labor force.

Among the SREB states, only Florida has a statewide system that monitors the progress of students from the time they begin their formal schooling until they graduate from high school.

The Florida system can track students when they transfer from one district to another, provide enrollment and dropout data by race and sex, and identify how many students, by race, sex, and grade level, are enrolled in different curricula and courses. Other states compile some of the same data at the state level but cannot produce summaries of the progress of individual students through the system.

Several states can furnish partial answers to some of the questions posed earlier. Seven SREB states (Alabama, Florida, Arkansas, North Carolina, South Carolina, Oklahoma, and Texas) have data on enrollment in each grade by race and sex. Only Florida, Georgia, and South Carolina are able to provide information on the number and percent of high school graduates by the type of curricula they complete. The absence of this

information may be due to the lack of a statewide definition for a "college preparatory" or "academic" curricula.

All SREB states except Georgia and Maryland know enrollment totals in courses or subject area. However, in only one state are such data available by ethnic group. This means, for example, that only one state knows how many black, white, Hispanic, and other minority students are taking algebra I, a key course in any plan to attend college.

The Science and Mathematics Indicators Project being conducted by the Council of Chief State School Officers for the National Science Foundation has recommended that course enrollments in science and mathematics be reported "by student gender and race/ethnicity." Nationally, it was found that course enrollments by sex were available from 10 of the 50 states; race data on course enrollments were available from only three states.

Data from the Science and Mathematics Indicators Project, the National Assessment of Educational Progress, and the National Dropout Study should provide states with additional indicators of progress toward the goal of better prepared college students.

At the postsecondary level, most colleges and universities have systems in place that track students from entry through graduation.

For example, the Tennessee Higher Education Commission produces an annual report on student graduation rates at all public institutions in Tennessee. The report indicates the number of students, by race, who graduated from the institution they entered or from another public institution in Tennessee within six years. Specific data for institutions are included in the report.

The University of North Carolina system has been collecting and reporting data on student

retention, attrition, and graduation rates by race and sex from each of its 16 senior institutions since 1977.

To be of maximum use, however, such data should be reported to the high schools from which the students graduated. This information would provide high schools with another indication of how well prepared their students are for college.

To adequately assess gains made in doing a better job of preparing students for college and in developing a better educated and more highly skilled workforce, states will need to gather and provide more and better information by sex and minority group membership. Without this information, it will be difficult to develop and implement programs and activities that will reduce the disparities in educational attainment among different ethnic groups.

Answers to the 20 questions posed earlier will provide the short-term benchmarks by which states can measure progress toward improved readiness for college. The long-term indicator will be the levels of educational attainment of the 25-year and older population in the year 2000.

The goal of improving readiness for college does not stand alone. It is dependent on other goals. It is clear, for instance, that students who are better prepared for the first grade are more likely to be successful as they progress through elementary and secondary school and, thus, will be better prepared for college 12 years later.

Improved student achievement in elementary and secondary schools, lower school dropout rates, effective teacher education programs, and schools with improved management and productivity will all be a part of having more and better prepared high school graduates and college students.